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A
TREATISE
ON THE
PRESERVATION OF THE TEETH,
FOR
THE USE OF FAMILIES.
BY
DANIEL MANN, M. D.
SURGEON DENTIST.

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OF THE NEGLECT OF THE TEETH AND ITS
CONSEQUENCES.

THE sound and perfect condition of the teeth is so intimately connected with our daily comforts and our social enjoyments as to render it surprising that any should neglect the necessary means of preserving them from decay and loss. And yet nothing is more common than their neglect, even among persons who in other matters are careful of all that concerns their interests and happiness.

This neglect often arises from a want of sufficient information on the subject, and from early habits of inattention. Parents are not generally careful to impress upon children the necessity and the means of preserving their teeth; and the consequences of neglecting them are not thought of until they are severely felt, and it becomes too late to remedy them.—The slow and insidious approaches of disease are not likely to excite much attention, and while they continue to perform their office without giving trouble, they are not examined with much scrutiny.

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This neglect, however, is generally followed by a severe penalty. Few persons arrive at the age of maturity without having suffered the tortures of toothache and the horrors of extraction; and in many, the ravages of disease and decay have entirely destroyed the usefulness and beauty of the teeth, and rendered them a source only of misery and mortification.

The evils of decayed and decaying teeth are too obvious to need, and too disagreeable to invite detail. Pains and aches innumerable, deformity of feature, dyspepsia, derangement of the constitution and deprivation of life's common enjoyments, are first in the catalogue, examples of which are so common, that all who can learn wisdom from other's misfortunes have sufficient opportunity.

Having devoted my attention for some years past to this department, with the best opportunities for information and practice, and wishing to extend the benefits of judicious treatment beyond the limits of my personal attention and practice, I have in this treatise condensed in as few words as possible, all the information upon the subject, which can be of general utility; the observance of which will enable those who have good teeth to preserve them, and those who have bad ones to remedy them.

OF THE VALUE OF THE TEETH.

The value of the teeth is seldom known until it is dearly taught by their loss. People part with them, one after another, with as much indifference as if they were made only to be extracted. It should be known by every one that a good set of teeth is a more valuable possession than any thing which money can buy. Every tooth lost is an irreparable loss. It lessens the firmness and durability of those which remain, while at the same time it imposes upon them additional labor. The loss of one tooth is soon followed by that of another, and a person who has one extracted may generally calculate upon

being compelled to a similar operation every year or two, unless effectual measures are taken to prevent the progress of decay.

Let the disadvantages of decaying teeth be considered. The pain of toothache and extraction is not small, but it is the least of the evils suffered. If the teeth be imperfect, the mastication of the food is necessarily imperfect, besides being more tedious ; consequently the enjoyment of eating is lessened, in proportion as the teeth become less perfect," until it becomes inconvenient and painful.

As the food is less perfectly masticated, the stomach suffers, —the health becomes impaired, and all the enjoyments of life are lessened.

As the teeth fall out, the cheeks and lips fall in, the gums recede, the jaws fall together, the visage becomes contracted and wrinkled, and all the marks of old age invade the very prime of life. Persons at sixty with good teeth, may count themselves younger than persons at forty without them. A good set of teeth are of more real value than the inheritance of a princely fortune.

OF THE STRUCTURE OF THE TEETH, AND THE MANNER IN WHICH THEY BECOME DIS- EASED AND BEGIN TO DECAY.

The human teeth seem peculiarly liable to the ravages of disease and decay. They possess just enough of vitality to feel and to suffer, without sufficient energy to take on that restorative process which, in other parts tend to a spontaneous cure. Hence, when decay has once commenced in them it continues to progress more or less rapidly to an indefinite extent.

The precise nature of that common disease of the teeth, called *caries*, has been the subject of some discussion and dif-

ference of opinion, but its important characters, its external appearance, and its tendencies are well known. While it preys upon and destroys the tooth originally attacked, it also infects those adjoining, and when the first is destroyed the next are seen to be also in a state of decay. It also frequently attacks several teeth at once, and unless arrested by timely and judicious treatment, it continues its ravages until all are destroyed.

The principal parts of a tooth are the *root*, the *neck*, and the *crown*. The root is imbedded in its socket, within the jaw. The neck is surrounded by the gum, which strongly adheres to it, and the crown is the only part exposed to view. The *root* and *neck* are similar to the other bones of the system, and are supplied in a similar manner with vessels and nerves, by which a degree of vitality and sensitiveness is maintained.—The *crown* is mostly of a very different structure, its outer portion or enamel consisting of a whiter and somewhat transparent substance, adapted by its great strength and hardness to the purposes of cutting and grinding the food, and also to protect the softer and bony parts from injury, while its polished and brilliant surface gives ornament and expression to the features.

It is however the crown of the tooth that is principally subject to decay. Notwithstanding the extreme strength and hardness of the enamel, it is not proof against all the agents brought to act against it. Sometimes it is fractured by the application of hard substances, as in cracking nuts, &c., and sometimes corroded and destroyed by substances which act chemically, as drinks, washes, powders, medicines, &c. prepared with acids. In a few cases their original constitution is bad, and the enamel softer or thinner than usual. This probably happens from an imperfect state of health in the individual at the early period when the teeth are formed, and a consequent imperfection in their original structure. Sometimes also the enamel, although thick and strong, is not perfect and entire, being wrinkled and irregular in some parts and having deep fissures which admit and retain the secretions of the mouth, and give origin or an inlet to disease. This is

most often the case with the upper surface of the grinding teeth of the lower jaw, and the posterior surface of the upper front teeth.

It sometimes happens too that the enamel, instead of presenting the usual polished surface, is covered with an infinite number of minute excavations and projections, too small to be seen separately, but giving a uniformly rough and dark appearance. This rough surface accumulates and retains the saliva, with portions of whatever is taken into the mouth, and acts upon the enamel like rust upon iron, gradually eating away and destroying it. The saliva, even of a person in health quickly becomes so far altered as to corrode and injure the teeth when confined in contact with them. Hence, persons who have not been careful to wash their mouths and to remove the portions of food and other matters which adhere to the teeth, suffer sooner or later from their decay. The saliva mingled with particles of food accumulating between and around them, becomes offensive and exerts its injurious influence not only upon the teeth, but upon the health of the whole system.

The bony portion of the teeth is seldom affected until the enamel is partially destroyed, and no longer affords it sufficient protection. The progress of decay is then more rapid, and the tooth soon becomes tender, then painful, and if suffered to remain, the root becomes diseased and at length ulcerates, and its loss is rendered inevitable.

OF THE MEANS OF PREVENTING THE DISEASE AND DECAY OF THE TEETH.

The obvious means of preventing these evils, is by guarding against the causes which produce them, the chief of which have already been enumerated. The teeth should not be exposed to mechanical violence nor to the action of acids, or

other injurious substances, farther than can be avoided. They should be cleaned habitually after each meal, with warm or cold water and a suitable brush or sponge, which should be well applied to every part of them, ending the operation by passing the brush up and down in the direction of the teeth, beginning at the gum. This last precaution tends to preserve the gum in its proper position about the necks of the teeth. A little castile or common shaving soap may be rubbed upon the moistened brush before using it. This assists in cleaning the teeth and leaves them agreeably smooth and polished. A tooth powder may be used occasionally.* The use of tobacco, though it may sometimes relieve the toothache, *never* preserves the teeth, — on the contrary, from the habits of nastiness which it fosters, it often leads to their injury.

It is well to avoid the use of those washes and powders for the teeth, the composition of which is kept secret, since they often, and indeed generally, contain some hurtful ingredient, notwithstanding assurances and certificates to the contrary.— Much mischief constantly arises from the use of these nostrums, and they are at best unnecessary, as a brush and clean water, with a little soap, and the occasional use of the simple powder already described is fully sufficient for all purposes.

Particles of food or other matters which are confined between the teeth should be removed with a tooth-pick, for which a quill is convenient and proper. A piece of cambric or silk may also be used to advantage by passing the edge between the teeth. After any of these operations, the mouth should be rinsed to carry away the detached particles. They who are thus careful of their teeth, while yet sound, will preserve them from decay, and besides much inconvenience and suffering, will avoid the mortification of an unhealthy looking mouth and a disagreeable breath.

* An excellent dentifrice may be compounded by an apothecary, as follows:—Take of Red Peruvian Bark, Myrrh, Orris Root, Loaf Sugar, each one ounce; Armenian Bole, two ounces; pulverise and mix them well together.

Rub the wet brush upon a piece of soap and then apply it to the tooth powder, enough of which will adhere for once using.

OF THE MEANS OF ARRESTING THE PROGRESS OF
DECAY IN THE TEETH.

The early period of life, (from the age of eight or ten to twenty,) is that in which the teeth are most susceptible of injury and disease, and unfortunately that in which they are most generally neglected, and therefore it often happens, that they have begun to decay before any means are adopted for their preservation. Most commonly the enamel is corroded near the gum, and becomes rough and discolored. When this happens, the rough and dark surface should be removed, and the enamel restored to its proper smoothness and brilliancy. If this is done with proper instruments, by a careful hand, no injury can arise from the operation, and its expediency is established on the same principle that we polish metallic instruments and preserve them from rust. After they have been made smooth they should be kept so by the frequent use of the brush as before directed.

The hard substance, called *tartar*, which often accumulates about the necks of the teeth, especially the lower front teeth, should be carefully and entirely removed by a dentist, and afterward kept away by the brush. When it remains, besides its filthy effect, it inevitably occasions the loss of the teeth.

When it is perceived that decay has commenced in any part of a tooth, and an opening of any size formed, it is unquestionably the best policy to have it immediately attended to, and the progress of the mischief arrested as early as possible. It is easy for a skillful dentist to remove the diseased surface from the cavity while it is yet small, and afterwards to fill the place with gold in such a manner as effectually to preserve the tooth from further decay. The sooner this is done after the first symptoms of decay are observed the better will be the result. The operation will be performed more easily and with less expense, and if properly done will never need repeating. But this becomes more difficult and uncertain as the cavity becomes larger, and if too long neglected the defect will increase until it becomes irremediable.

It is true, however, that teeth which are much decayed and

even more than half gone, still may often be repaired and rendered very useful and comfortable, but, as before observed, the difficulty and expense are greater, and the appearance of the tooth less perfect than when seasonably done. As therefore, nothing is gained and much is lost by delay, it is the true policy of every one who can estimate the advantages of sound teeth, to have every portion of decay seasonably eradicated.

As the operation is so important, and as its efficacy depends upon the degree of skill and faithfulness with which it is performed, it is desirable that persons should be well assured, as to the character and qualifications of the dentist whom they employ. Unless the operation be skillfully and faithfully performed, it will certainly prove at least useless, probably worse than useless. It is not sufficient merely, that the cavity should be filled, whether with gold or with any other metal. If it be not previously prepared by removing every particle of the diseased and discolored surface, that part which is left will retain and communicate the disease, and the tooth will continue to decay as rapidly as before. The shape of the cavity must be properly fitted for receiving and retaining the gold and this must be put in so perfectly as to exclude every particle of moisture, or no benefit is to be expected. If there be the least chance for air or moisture to penetrate by the side of the metal into the cavity, then the whole object is defeated, the tooth continues to decay, and in the course of a few months the filling becomes loose and falls out, leaving the cavity more exposed than ever. But if the diseased surface be entirely removed and the cavity properly fitted, and the gold properly prepared and properly inserted, it will effectually prevent the further progress of decay, and render the tooth as sound and useful as ever.

These conditions require a competent and faithful hand. As the teeth are invaluable and the loss of but a single one is always severely felt, and as so many mere pretenders are constantly imposing their services upon the public, without the qualifications which should entitle them to confidence, it is proper that due precaution should be used, and no one employed without good reason for confidence in his skill and faithfulness.

OF THE MEANS OF PREVENTING IMPOSITION.

Any person of discernment, by carefully examining the operations of a dentist, may judge of the degree of skill with which they are performed. When a tooth is filled, the surface of the gold should be level with the surrounding edge of the cavity, which should be smooth and sound, without any line of discoloration, the whole presenting an appearance like a bar of gold driven into clear ivory, and smoothed even with the surface. If after a number of weeks or months, the tooth and especially the edge of the cavity surrounding the gold, remain clear and white, it is good evidence of the faithfulness of the operation; if, on the contrary, the tooth or that part of it surrounding the gold, turns gradually of a dark and unhealthy color, it is certain evidence that the performance was good for nothing, and that no time should be lost in having it done over again, in a different and effectual manner. It is exceedingly important to guard against imposition and quackery in this particular, as no operations but those which are entirely perfect are of any benefit, and as there is no business in which imposition is more easy, more common, or more mischievous. It is the misfortune and disgrace of the profession, that many persons have adopted it without any adequate knowledge or skill, and without any feeling of honorable principle to deter them from the basest frauds. Every dentist who feels a just pride in maintaining the reputation and the usefulness of his profession, will frequently have his indignation excited by the specimens of mischievous and fraudulent operations, which come within his observation.

Every means of guarding against such impositions should be employed by the public. Every person of discernment should qualify himself to judge of operations, by carefully examining those of the best dentists and comparing them with those of a different character—and no persons should be employed in this business except those whose ability and fidelity may fairly be depended upon. The qualifications of a competent dentist will be treated of under the following head.

QUALIFICATIONS OF A DENTIST.

Those personal qualifications which are regarded as indispensable to the character of a gentleman, and which should pertain to every member of a liberal profession, must be considered as essential to the dentist, and without these qualities no person should be countenanced in a profession where so much is necessarily entrusted to the judgment and honesty of the person employed.

A strong feeling of responsibility and desire of honorable reputation, naturally attaches to persons of liberal attainments and habits. Next to a habitual sense of moral accountability, there is, perhaps, no stronger incentive to faithfulness, than that desire of self-approbation and that ambition of deserving confidence, which is quickened in a cultivated mind. For this as well as for professional reasons, a medical education, and especially a knowledge of anatomy and physiology is necessary to the character of a competent dentist. He should possess a perfect knowledge of the principles of his art, which can only be acquired under the instruction of an accomplished dentist. He should also be of what is called a mechanical genius—having a natural readiness, dexterity and neatness in mechanical operations. He will also find that a good degree of health, and capability of bearing fatigue, is essential to the successful exercise of his profession, and that gentleness and delicacy in operating, and a patient regard for the apprehensions, however needless, of his patient, will not render his services less acceptable, and that this deportment is as easily practiced as the opposite one of roughness.

These are qualifications which are necessary to the foundation of a dentist's character, and when these are combined with experience and assiduity, there can be no doubt of his very great usefulness. His knowledge and skill enable him to remove and remedy deformity, to counteract the causes of disease, to prevent the premature losses and infirmities of age, and to give a degree of permanency to the essential blessings of early life.

OF ARTIFICIAL TEETH.

Artificial teeth may be inserted with different degrees of advantage, according to the circumstances of different cases. Those which are attached to the root of the former tooth, while it yet remains firm, or which are inserted upon a gold plate with elastic springs properly applied, are the most beneficial.

The method of securing artificial teeth by wire or ligatures attached to the adjoining teeth is generally injurious, and often destructive to the teeth to which they are fastened, and therefore should generally be avoided. In all cases the teeth and fastenings should be fitted with the nicest accuracy, as any irregularity must cause continual inconvenience, and a ligature or springs so applied as to press unequally upon one side of a tooth, has an immediate tendency to loosen it and destroy its usefulness. Great improvements have been made within a few years in the manufacture of mineral teeth, which when skillfully inserted, are not liable to some of the strongest objections against animal teeth.

It should be understood, however, that no perfection of artificial teeth can supercede the importance of preserving those which nature supplies, which should be saved in all cases where it is possible for human skill to prevent their loss.—Persons have sometimes been induced by the interested representations of dishonest operators to part with valuable natural teeth, and have the place artificially supplied, to their very great subsequent regret. Teeth which yet remain tolerably entire externally may generally be filled and made more valuable than any that can be put in their place. This is often the case even after they are much broken away.


When, however, they have become too much decayed to be filled, it is often desirable to have the defective crown cut off and replaced as soon as possible, as the progress of decay in the root as well as in the other teeth, is thereby prevented.

As this treatise is not intended to give professional instruction, it is only necessary further to remark that this department requires skill and faithfulness, and to repeat the

caution elsewhere suggested against incompetency and fraud. Clumsy and injurious operations are not uncommon.

A HINT TO PARENTS.

It is well known that many persons have teeth of so bad a constitution that the utmost care is scarcely sufficient to preserve them, and they often become entirely decayed at an early age. This constitutional weakness and predisposition to disease, is sometimes partly hereditary, but it more frequently is the consequence of the diseases of childhood. The teeth like every other part of the system, are formed in very early life, by the action of vessels which select their ingredients from the circulating system. It is consequently necessary that these vessels should be in healthy and vigorous action, and that the fluids in circulation should be in a free and healthy state, that they may furnish healthy materials, or otherwise the rudiments of the teeth cannot have that healthy and perfect organization which is so necessary to their durability. To secure these conditions every salutary means of preserving the natural healthiness of childhood should be employed—the chief of which are proper attention to diet, cleanliness and exercise in the open air, with a careful restriction from those luxuries with which indulgent parents poison the fountains of health in their offspring. Children who are brought up in the country where the indulgence of sweetmeats and confectionary is rare, who eat only when hunger and exercise has made the simplest food palatable, grow up with comparatively little liability to the inconveniences and miseries which afflict the nurselings of luxury.



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